

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Part 2 of the Commission's Rules)	ET Docket No. 00-258
to Allocate Spectrum Below 3 GHz for Mobile and)	
Fixed Services to Support the Introduction of)	
New Advanced Wireless Services, including)	
Third Generation Wireless Services)	

To: The Commission

**REPLY OF THE RURAL OPERATORS ALLIANCE
TO THE OPPOSITION OF UNITED STATES CELLULAR CORPORATION**

The Rural Operators Alliance ("Alliance"), a coalition of Broadband Radio Service ("BRS") operators and licensees in rural markets,¹ by counsel, hereby submits this Reply to the Opposition filed by United States Cellular Corporation ("USCC")² in the above-captioned proceeding.³ Though USCC acknowledges the very real possibility that operation of Advanced Wireless Service ("AWS") facilities could cause harmful interference to non-cochannel BRS-1/2 facilities, USCC nevertheless maintains that newly-adopted Section 27.1255(b) of the Commission's Rules is adequate to protect incumbents.⁴ This rule,

¹ A list of the Alliance members and the markets where they provide broadband service on BRS-1/2 is attached hereto as Exhibit 1. A number of the members participated as members of the BRS Rural Advocacy Group in this docket as well as WT Docket No. 03-66 and IB Docket No. 02-364. *See, e.g.*, Consolidated Reply to Oppositions to Petitions for Reconsideration, WT Docket No. 03-66, submitted March 9, 2005; Consolidated Opposition to and Comments in Support of Petitions for Reconsideration of the BRS Rural Advocacy Group, WT Docket No. 03-66, submitted Feb. 22, 2005; Petition for Partial Reconsideration of the BRS Rural Advocacy Group, WT Docket No. 03-66, submitted Jan. 10, 2005; Opposition to Petition for Reconsideration of Globalstar LLC, ET Docket No. 00-258, submitted Oct. 27, 2004. Polar Communications and Northern Wireless Communications, Inc. also jointly filed a pleading in this proceeding prior to issuance of the *Order*. *See* Joint Reply Comments of Polar Communications and Northern Wireless Communications, Inc., ET Docket No. 00-258, submitted Dec. 12, 2005 ("Polar/Northern Reply").

² *See* Opposition of United States Cellular Corporation, ET Docket No. 00-258, submitted Aug. 3, 2006 ("USCC Opposition"). USCC is the only party that has opposed the Petition for Reconsideration of Ninth Report and Order submitted by the Wireless Communications Association International, Inc. ("WCA") on June 23, 2006 ("WCA Petition").

³ *See* Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Services, ET Docket No. 00-258, *Ninth Report and Order*, FCC 06-45, rel. Apr. 21, 2006 ("Order").

⁴ *See* USCC Opposition at 2.

however, requires AWS licensees to take steps to eliminate non-cochannel interference only *after* “actual and demonstrable interference to a BRS licensee” results, a proposition that would unfairly and unnecessarily disrupt service to the Alliance members’ customers. To remedy this problem, the Commission should instead follow the practice utilized in other services and, as advocated by WCA,⁵ require AWS newcomers to coordinate their operations with non-cochannel BRS incumbents *prior to* initiating service.

In addition, the Alliance joins W.A.T.C.H. TV Company (“WATCH TV”)⁶ and Sioux Valley Wireless (“SVW”)⁷ in supporting adoption of WCA’s other proposals, which have not been opposed in this proceeding. Specifically, the Alliance urges the Commission to amend its rules to allow for:

- reimbursement of a BRS-1/2 licensee’s modification expenses incurred in increasing throughput;⁸
- self-relocation of BRS-1/2 facilities;⁹
- recovery of internal costs associated with involuntary relocation;¹⁰ and
- deployment of comparable facilities (including customer equipment) by the BRS licensee where an involuntary relocation occurs.¹¹

⁵ See WCA Petition at 2-7. Notably, in the proceeding leading to adoption of the *Order*, two Alliance members – Polar Communications and Northern Wireless Communications, Inc. – urged the Commission to ensure that BRS incumbents were protected from cochannel and non-cochannel interference. See Polar/Northern Reply at 8-9 (“relocation should be required whenever the AWS licensee’s operations would have line of sight within the BRS licensee’s Geographic Service Area (“GSA”).

⁶ See Comments of W.A.T.C.H. TV Company, ET Docket No. 00-258, submitted Aug. 3, 2006 (“WATCH TV Comments”).

⁷ See Comments of Sioux Valley Wireless, ET Docket No. 00-258, submitted Aug. 3, 2006 (“SVW Comments”).

⁸ See WCA Petition at 7-12; WATCH TV Comments at 2-3; SVW Comments at 5-6.

⁹ See WCA Petition at 12-15; WATCH TV Comments at 3; SVW Comments at 6.

¹⁰ See WCA Petition at 16-19; WATCH TV Comments at 3-4; SVW Comments at 4.

¹¹ See WCA Petition at 19-21; WATCH TV Comments at 3.

Statement of Interest

The members of the Alliance operate BRS/EBS systems on 2.1 GHz and 2.5 GHz spectrum serving customers in numerous small and rural communities in Arizona, Iowa, Minnesota, South Dakota, North Dakota and Texas, and are representative of other operators that provide competitive MVPD and wireless broadband services in these bands.¹² The Alliance members utilize the 2150-2160 MHz band for downstream communications (to the customer), upstream communications (from the customer), or a combination of both, to deliver two-way wireless broadband services. In many cases, the Alliance members offer broadband services where DSL and cable modem services are not available.

More specifically, **Central Texas Communications, Inc.** uses BRS-1/2 to provide wireless broadband services to more than 2,400 customers from a site near Goldthwaite, Texas. **CommSpeed AZ, L.L.C.** provides broadband service on BRS-1/2 to rural customers in the Prescott, Arizona area. The service has been available since 2000 and there are currently 2,360 customers that receive broadband service. **Evertex, Inc.** utilizes all of the capacity on its BRS licenses to provide MVPD and broadband services in the agriculturally-based communities of Everly, Palmer, Quimby and Sioux City, Iowa. Evertex has provided broadband service for the last seven years and currently serves approximately 2,500 customers, the overwhelming majority of whom have no other choice in service. **Northern Wireless Communications, Inc.** provides wireless broadband services to nearly 1,000 customers in the Aberdeen and Redfield, South Dakota areas. **Polar Communications** uses BRS-1/2 spectrum to provide broadband services to more than 500 customers in Grand Forks, North Dakota and other communities in northeast North

¹² The *Order* cites WCA's estimate that BRS-1/2 are used in 30-50 markets. *Order* at 9. As Exhibit 1 indicates, the Alliance members transmit from 16 different locations, meaning that they compose a significant proportion of the estimated total.

Dakota and northwest Minnesota. Since 2001, **Starcom Inc.** has used BRS-1 to provide downstream broadband access to its customers in the Fairmont, MN area, and it currently serves approximately 800 customers. **United Telephone Mutual Aid Corporation** provides broadband services to about 200 customers in and around the small communities of Milton and Egeland, North Dakota using BRS-1 for upstream communications.

Discussion

THE COMMISSION SHOULD AMEND ITS RULES TO REQUIRE AWS LICENSEES TO COORDINATE WITH BRS-1/2 LICENSEES PRIOR TO DEPLOYING SERVICE.

In the *Order*, the Commission concluded that it would be “inappropriate” to impose relocation obligations on adjacent-channel (AWS F-Block) and non-adjacent-channel (AWS A-E Blocks) licensees if the BRS station was within line-of-sight of the AWS operations.¹³ The Commission presumed that “such AWS operations will not pose a large enough potential for interference to BRS incumbent licensees to warrant an automatic relocation obligation without first determining whether harmful interference to BRS will actually occur.”¹⁴ Notably, the Commission did not discount the possibility that, once an AWS station is placed in operation, harmful interference to incumbent BRS stations might occur.

In its Petition, WCA urged the Commission to adopt a notice and response procedure under which AWS licensees would be required to coordinate with BRS incumbents prior to launching service.¹⁵ WCA explained that this process would be consistent with policies adopted in the *Emerging Technologies* proceeding¹⁶ and subsequently

¹³ See *Order* at 30.

¹⁴ *Id.*

¹⁵ See WCA Petition at 5.

¹⁶ See Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, *First Report and Order and Third Notice of Proposed Rulemaking*, 7 FCC Rcd 6886 (1992) (“*Emerging Technologies*”).

successfully applied to the PCS service,¹⁷ stating that “there is no reason why BRS licensees should not be entitled to the same prior notice and response coordination.”¹⁸ The Alliance agrees with WCA that, if allowed to stand, the Commission’s rule requiring after-the-fact resolution of interference would have dire consequences for BRS customers, who would have their service disrupted for “days, weeks or even months, while the newcomer (who likely will be competing against the incumbent) can commence its business operations.”¹⁹

In response to the Commission’s concerns, WCA’s proposal to require prior notice and response coordination moderated its initial proposal that all BRS licensees within line-of-sight of the AWS facilities must be relocated. Because only those non-cochannel BRS stations that would suffer harmful interference after pre-launch coordination would be required to be relocated, WCA’s proposal should have addressed the Commission’s concerns that relocating all BRS-1/2 licensees within line-of-sight of AWS facilities would be “over inclusive”²⁰ and alleviated USCC’s fears that mandatory relocation would delay AWS deployments.²¹ Requiring prior coordination may mean that, perhaps in many cases, no relocation would be necessary at all.

Significantly, WCA’s new proposal is apparently acceptable to all parties that opposed its initial plan – except USCC, which continues to insist that the threat of non-cochannel interference can be overcome by employing a variety of voluntary interference mitigation techniques.²² Curiously, USCC never disputes the fact that harmful non-cochannel interference could arise and never challenges the benefits of prior coordination presented by WCA. Instead, USCC rehashes the rationale the Commission articulated in

¹⁷ See Amendment of the Commission’s Rules to Establish New Personal Communications Services, *Memorandum Opinion and Order*, 9 FCC Rcd 4957, 5030 (1994).

¹⁸ WCA Petition at 6.

¹⁹ *Id.* at 5.

²⁰ *Order* at 31.

²¹ See Reply Comments of USCC, ET Docket No. 00-258 (submitted Dec. 12, 2005), at 3.

²² See USCC Opposition at 3-4.

rejecting the earlier line-of-sight approach²³ – since abandoned by WCA – and defends its engineering analysis.²⁴

Yet even in this exercise USCC misses the point. The issue is not whether, in a majority of cases, AWS operators *may* design their systems to mitigate non-cochannel interference – it is whether *any* possibility of interference can be eliminated through a time-tested prior notice and response coordination process that has been used successfully in other services. It matters not whether “[m]eans of mitigating interference, such as inexpensive filtering, replacement of pre-amplifiers and replacing degraded radios, are available.”²⁵ It matters not whether there might be sufficient path losses between the AWS transmitter and BRS receiver.²⁶ It matters not whether there is a low probability of serious interference to BRS receive hubs.²⁷

What matters is that there is a process that can determine whether, in the real world, on a case-by-case basis prior to deployment of AWS facilities, incumbent BRS-1/2 licensees and their customers will suffer harmful non-cochannel interference from new entrant competitors. In this respect, USCC’s own words are revealing and, in fact, support the rule change proposed by WCA:

AWS operation on Channel Blocks A-E in proximity to a BRS receive hub without causing interference to the latter is a straightforward engineering exercise requiring only normal attention to interference mitigation, *perhaps* requiring routine measures such as additional transmit/receive filtering to the sites. AWS operation in the lower 5 MHz of Channel block F without causing harmful interference is somewhat more difficult, requiring more

²³ For instance, in its Engineering Statement, USCC recites the Commission’s conclusion that “automatic relocation of BRS operations is not warranted as AWS is deployed in the same region, a position with which we agree completely.” USCC Opposition, Attachment A (“USCC Engineering Statement”), at 11. This statement has nothing to do with the proposal advanced in the WCA Petition which, short of automatic relocation, proposes rules for coordination prior to AWS deployment and which may, on a case-by-case basis, obviate the need for relocation.

²⁴ *See* USCC Opposition at 4-5.

²⁵ *Id.* at 3-4.

²⁶ *See* USCC Engineering Statement at 4.

²⁷ *Id.* at 11.

careful attention to specific details of both BRS and AWS equipment configurations, perhaps some empirical testing, and *good faith cooperation between the carriers*.²⁸

As the above passage makes clear, in some instances there may be interference and in those cases, different mitigation techniques may be employed that would eliminate the interference.²⁹

The numerous benefits of WCA's proposal to prevent interference before it occurs far outweigh the disruption that would result from an obligation to address interference after it occurs, and thus "best balance[s] the interest of new licensees seeking early entry . . . with the need to minimize disruption to incumbent operations used to provide service to customers during the transition."³⁰ First, through a prior notice and response coordination process, the potential for future interference can be assessed and, if necessary, the affected parties can agree on ways that interference can be eliminated before an AWS base station is placed in operation. Different environments may call for different solutions, and the coordination process is designed to bring parties together to develop solutions that will be mutually acceptable in a given situation.

Second, prior coordination greatly minimizes – if not altogether eliminates – the untenable possibility that the Alliance members' customers will have their service disrupted, leaving them with the choice of doing without broadband altogether or migrating to a competitor. AWS newcomers should not be entitled to the competitive benefit of causing interference to BRS incumbents, a plausible result in many rural areas where the Alliance members provide broadband services to customers and the only alternative solution may be

²⁸ *Id.* (emphases added).

²⁹ See, e.g., WCA Petition at 3 ("there is a risk of non-cochannel interference, particularly where AWS licensees utilize equipment that only marginally complies with the Section 27.53(g) OOB limits, operates near maximum authorized power, or is in close proximity to a BRS receiver").

³⁰ *Order* at 8.

the new AWS service. Rural operators value each customer and simply cannot suffer the adverse consequences of debilitating interference. When considering that the interference to the incumbent system results from the introduction of service from the AWS newcomer, the imbalance of the present *post hoc* interference resolution scheme is obvious – yet almost entirely avoidable through prior coordination.

Third, by subjecting incumbent BRS-1/2 licensees and their customers to harmful interference, the BRS licensee would be reticent to make service level guarantees to customers or prospective customers. If a BRS operator cannot guarantee that prolonged and disruptive interference may suddenly arise and may not abate in a timely manner, it will be difficult for the operator to attract customers and compete. In this respect, the new rules relegate BRS-1/2 to the status of a secondary or unlicensed service.

Fourth, AWS new entrants will not experience any significant delay in the deployment of their base stations. The coordination process would be part of an AWS licensee's spectrum planning and would occur in parallel with the coordination obligations they will already have with respect to point-to-point microwave and government users.³¹ Where other coordination obligations do not exist, any delays will be minimal, especially where both parties are committed to finding solutions to mitigate interference. Moreover, it is likely that engaging in prior coordination to identify and address real-world interference will be less expensive for the AWS licensee than curing the interference after it occurs.

Fifth, as discussed by WCA, the Alliance is not asking for anything to which similarly-situated licensees are not already entitled.³² Since the adoption of *Emerging Technologies*, the Commission has consistently required newcomers to prior coordinate with

³¹ See WCA Petition at 7, n.20, citing Public Notice, “The Federal Communications Commission and the National Telecommunications and Information Administration – Coordination Procedures in the 1710-1755 MHz Band,” FCC 06-50, rel. Apr. 20, 2006.

³² *Id.* at 5-6.

incumbents that may need to be relocated as a means to avoid interference. In addition to PCS, Section 27.1131 requires AWS licensees to coordinate with point-to-point microwave users prior to initiating operations where the threat of harmful interference exists. Curiously, the Commission did not extend that same requirement to non-cochannel BRS licensees, despite the recognition by all parties – USCC included – that interference may result.

Conclusion

By adopting WCA's prior coordination proposal, the Commission can better balance the interests of newcomers and incumbents, and greatly decrease instances of harmful interference that rural wireless broadband customers would otherwise suffer. In view of the foregoing, the Rural Operators Alliance requests grant of the WCA Petition.

Respectfully submitted,

RURAL OPERATORS ALLIANCE

August 14, 2006

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Exhibit 1

Rural Operators Alliance

Central Texas Communications, Inc.

Goldthwaite, TX

CommSpeed AZ, L.L.C.

Prescott, AZ

Evertex, Inc.

Palmer, IA

Quimby, IA

Sioux City, IA

Everly, IA

Northern Wireless Communications, Inc.

Aberdeen, SD

Redfield, SD

Polar Communications

Grafton, ND

Grand Forks, ND

Lakota, ND

Northwood, ND

Robbin, MN

Starcom Inc.

Fairmont, MN

United Telephone Mutual Aid Corporation

Egeland, ND

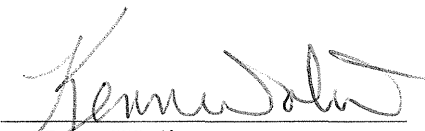
Milton, ND

Certificate of Service

I, Kenn Wolin, a legal assistant at Rini Coran, PC, do hereby certify that on this 14th day of August, 2006, I caused copies of the foregoing “Reply of the Rural Operators Alliance to the Opposition of United States Cellular Corporation” to be sent by United States Postal Service, First Class Mail, to the following persons:

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